

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application:

Peter Rae Shintani et al.

Application No.: 10/811,036**Filed:** March 26, 2008**Title:** "Systems and Methods for Television
Antenna Operation"**Confirmation No.:** 9541**Examiner:** LONSBERRY, Hunter B.**Group Art Unit:** 2421

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF**Sir:**

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on **October 27, 2008** and the Notification of Non-Compliant Appeal Brief mailed on **February 3, 2009**.

() The fee for filing this Appeal Brief is **\$540.00** (37 CFR 41.20).

(X) No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provision of 37 CFR 1.136 (a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: CFR 1.17(a)-(d)) for the total number of months checked below:

- () one month \$130.00
- () two months \$490.00
- () three months \$1110.00
- () four months \$1730.00

() The extension fee has already been filed in this application

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant had inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **18-0013/40000-0052** the sum of **\$0.00**. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **18-0013/40000-0052** pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account **18-0013/40000-0052** under CFR 1.16 through 1.21 inclusive, and any other section in the Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of:

Peter R. Shintani et al.

Application No.: 10/811,036

Filed: March 26, 2004

For: Systems and Methods for
Television Antenna Operation

Group Art Unit: 2421

Examiner LONSBERRY, Hunter B

Confirmation No.: 9541

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
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Sir:

This is an Appeal Brief under Rule 41.37 appealing the decision of the Primary Examiner dated June 27, 2008 (the “final Office Action”). Each of the topics required by Rule 41.37 is presented herewith and is labeled appropriately.

I. Real Party in Interest

The real parties in interest are Sony Corporation of Tokyo, Japan and Sony Electronics, Inc. of New Jersey, to whom the present application has been assigned.

II. Related Appeals and Interferences

There are no appeals or interferences related to the present application of which the Appellant is aware.

III. Status of Claims

Claims 1-62 are pending in the application and stand finally rejected. Accordingly, Appellant appeals from the final rejection of claims 1-62, which claims are presented in the Appendix.

IV. Status of Amendments

Appellant filed a single after-final response on subsequent to the final Office Action of June 27, 2008, from which Appellant takes this appeal. However, that response did not propose any amendments. Therefore, it's entry into the record has no bearing on the content of the claims presented in this appeal.

V. Summary of Claimed Subject Matter

Claim 1 recites:

A system for controlling an exterior television antenna comprising:

an amplifier circuit (100) mounted on a building (102) exterior with said exterior television antenna (101) and connected to said television antenna (101) (*Appellant's specification, paragraph 0022*); and

a control line (106) extending into an interior of said building (102), said control line (106) being connected to said amplifier circuit (100) for controlling a gain of said amplifier circuit (100) (*Appellant's specification, paragraph 0025*).

Claim 18 recites:

A method for controlling an exterior television antenna comprising:

selectively amplifying (*Appellant's specification, paragraph 0023*) a signal from said television antenna (101) with an amplifier circuit (100) mounted on a building (102) exterior with said exterior television antenna (101) (*Appellant's specification, paragraph 0023*); and

a control line (106) extending into an interior of said building (102), said control line (106) being connected to said amplifier circuit (100) for controlling a gain of said amplifier circuit (100) (*Appellant's specification, paragraph 0025*).

Claim 34 recites:

A system for controlling an exterior television antenna comprising:

amplifying means (100) for selectively amplifying a signal from said television antenna (101), said amplifying means (100) being mounted on a building (10) exterior with said exterior television antenna (101) (*Appellant's specification, paragraph 0022*); and

control means (106, 120) for controlling a gain of said amplifying means (100), said control means comprising a receiving device (103, 120) inside said building (102) (*Appellant's specification, paragraph 0027*).

Claim 47 recites:

A system for controlling a television antenna comprising:

an amplifier circuit (100) mounted with said television antenna (101) and connected to said television antenna (101), wherein said television antenna is connected to, but located away from, a receiving device (103, 120) (*Appellant's specification, paragraph 0022; Figs. 1 and 2*); and

a control line (106) connected to said amplifier circuit (100) for controlling a gain of said amplifier circuit (100) based on a channel being tuned by said receiving device (103, 120) (*Appellant's specification, paragraph 0027*).

VI. Grounds of Rejection to be Reviewed on Appeal

The final Office Action raised the following grounds of rejection.

(1) Claims 1-16, 18-32, 34-45 and 47-61 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent App. Pub. No. 2004/0252243 to Stewart (“Stewart”).

(2) Claims 17, 33, 46 and 62 were rejected under 35 U.S.C. § 103(a) over the combined teachings of Stewart and U.S. Patent No. 6,069,462 to Flynn (“Flynn”).

According, Appellant hereby requests review of each of these grounds of rejection in the present appeal.

VII. Argument

(1) Claims 1-16, 18-32, 34-45 and 47-61 are patentable over Stewart:

Claim 1:

Claim 1 recites:

A system for controlling an exterior television antenna comprising:
an amplifier circuit mounted on a building exterior with said exterior television antenna and connected to said television antenna; and
a control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.

(Emphasis added).

Thus, claim 1 calls for “an amplifier circuit mounted on a building exterior with said exterior television antenna.” This amplifier circuit is has a variable gain that is controlled with “a control line extending into an interior of said building.” In contrast, Stewart fails to teach or suggest this subject matter.

Stewart teaches an antenna array (12) mounted outside a structure (18). Stewart further teaches a television signal processor (TSP) (14) that receives the signal from the antenna array (12). As shown in Fig. 7 of Stewart, the TSP (14) includes a plurality of tuners (52), each extracting a specific signal from the signal received from the antenna array (12). Each tuned signal is converted to a digital signal using an A/D converter (56). Then, the digital signals are individually conditioned *digitally* with phase and gain adjustment processing (60).

However, Stewart does not ever teach or suggest the claimed “control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.” In this regard, the final Action cites Stewart at paragraph 0049, Fig. 1 (element 18) and Figs. 6-8 (element 70). Paragraph 0049 of Stewart

describes the TSP (14) but does not mention, teach or suggest a control line that controls the gain of an amplifier circuit.

Paragraph 0049 does state that the “TSP 14 is in communication with distribution area 18 via a conductor 70, operative to carrying [sic] multiple television signals and communication signals, such as coaxial (coax) cable.” (Stewart, paragraph 0049). There is no teach or suggestion in Stewart that the coax cable (70) is used to control the gain of an amplifier circuit as is the claimed control line of claim 1.

On this subject, an Advisory Action dated October 17, 2008 (the “Advisory Action”) argues the following. “TSP 14 is coupled with the TSR’s via a communications line 70 (paragraphs 54-56). Figure 7 shows that this line is coupled to communications 76, which is in turn connected to the processor, which is in turn connected to Phase & Gain Adjustment & Summer signal processing 60. The requests original [sic] from the TSR’s 20 which inform the processor 72 which channels to select and perform the gain operations on (paragraph 64).” (Advisory Action, p. 2).

Thus, the Advisory Action appears to again be arguing that co-ax cable or communications line (70) is equivalent to the claimed “control line.” Again, Appellant notes that Stewart actually describes communications line (70) as merely being “operative to carrying [sic] multiple television signals and communication signals, such as coaxial (coax) cable.” (Stewart, paragraph 0049). There is no teaching or suggestion in Stewart that the co-ax line (70) is, or functions as, the claimed control line “extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.” (Claim 1).

The cited portion of the Advisory Action references Stewart at paragraph 0064. This paragraph of Stewart reads as follows. “[0064] The processor 72 is operative to select the

antenna providing a particular television channel to optimize the optimum television channel signal. Thus, in the typical case where two or more television channels are requested by two or more TSRs 20, the signals from certain antennas are selected to make up the set of television channel signals that provide the optimum television channel signal for each selected television channel.” (Stewart, paragraph 0064). Clearly, there is absolutely no teaching, suggestion, or even mention of adjusting the gain of an amplifier circuit in this portion of Stewart. Again, contrary to the unsupported insinuation in the Advisory Action, there clearly is no teaching or suggestion in Stewart that the co-ax line (70) is, or functions as, the claimed control line “extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.” (Claim 1). There is no such element taught or suggested by Stewart.

“A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. As demonstrated above, Stewart fails to teach or suggest the claimed control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit. Consequently, the rejection based on Stewart of claim 1 and its dependent claims should not be sustained.

Claim 18:

Claim 18 recites:

A method for controlling an exterior television antenna comprising:
selectively amplifying a signal from said television antenna with an amplifier circuit mounted on a building exterior with said exterior television antenna; and

a control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.

(Emphasis added).

In contrast, as demonstrated above, Stewart does not teach or suggest a method that includes selectively amplifying a signal from a television antenna with an amplifier circuit mounted on a building exterior with the antenna *with a control line extending into an interior of the building for controlling the gain of the amplifier circuit.*

Again, “a claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. As demonstrated above, Stewart fails to teach or suggest the claimed control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit. Consequently, the rejection based on Stewart of claim 18 and its dependent claims should not be sustained.

Claim 34:

Claim 34 recites:

A system for controlling an exterior television antenna comprising:
amplifying means for selectively amplifying a signal from said television antenna, said amplifying means being mounted on a building exterior with said exterior television antenna; and
control means for controlling a gain of said amplifying means, said control means comprising a receiving device inside said building.

(Emphasis added).

In contrast, as demonstrated above, Stewart does not teach or suggest a system that includes amplifying means for selectively amplifying a signal from a television antenna

mounted on a building exterior with the exterior television antenna, where a gain of the amplifying means is controlled by a control means comprising a receiving device inside the building. Stewart never teaches or suggests a receiving device inside the building that is part of the means for controlling the gain of amplifying means mounted on the building exterior.

Again, “a claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. Therefore, for at least the reasons explained here, the rejection based on Stewart of claim 34 and its dependent claims should not be sustained.

Claim 47:

Claim 47 recites:

A system for controlling a television antenna comprising:
an amplifier circuit mounted with said television antenna and connected to said television antenna, wherein said television antenna is connected to, but located away from, a receiving device; and
a control line connected to said amplifier circuit for controlling a gain of said amplifier circuit based on a channel being tuned by said receiving device.
(Emphasis added).

In contrast, as demonstrated above, Stewart does not teach or suggest a system that includes an amplifier circuit mounted with a television antenna the gain of which is controlled “based on a channel being tuned by said receiving device.” The final Office Action fails to individually address claim 47 (Action, p. 8) and never indicates how or where Stewart teaches the claimed control line which controls the gain based on the channel being tuned by the receiving device, e.g., a television.

Again, “a claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art

reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. Therefore, for at least the reasons explained here, the rejection based on Stewart of claim 47 and its dependent claims should not be sustained.

Additionally, various dependent claims of the application recite subject matter that is further patentable over the cited prior art. Specific, non-exclusive examples follow.

Claim 3:

Claim 3 recites “wherein said television outputs said control signal based on a channel being tuned by said television.” Claim 5 recites similar subject matter. It is important to note that the control signal recited specifically controls the *gain* of an amplifier circuit. (Claim 1).

In this regard, the final Office Action cites Stewart at paragraph 0027. (Action, p. 4). However, this portion of Stewart does not teach, suggest or even mention a control signal that controls the gain of an amplifier circuit being “based on a channel being tuned by [a] television.” Stewart teaches absolutely no connection between the gain of an amplifier circuit and a particular channel being tuned by a television or other receiving device.

In this regard, the Advisory Action cites to Stewart at paragraph 0056. (Advisory Action, p. 2). This paragraph of Stewart reads as follows.

[0056] The TSP 14 of FIG. 7 also provides analog to digital (A/D) format conversion (digitizing) as the format converter 56 for each output of the plurality of tuners 52. The plurality of tuners 52 is shown in communication with the A/D signal conversion 56 via an n-number conductor or connector 54. Thus, after each tuner of the plurality of tuners 52 has tuned to a television channel, each tuned television channel signal is converted from the analog domain to the digital domain by a respective A/D converter. Thereafter, each tuned television channel signal undergoes signal processing by the signal processing circuitry/logic 60. The A/D format conversion 56 is thus shown in communication with the signal processing 60 via an n-number conductor, connector, or path 58. In the TSP 14 of FIG. 7, such signal processing includes signal phase and gain adjustment, and signal summation. This is

accomplished for each set of television channel signals that constitute the same television channel. Particularly, the signal processing 60 separately adjusts the phase and gain of each set of television channel signals, a set of television channel signals consisting of all television channel signals that are the same television channel, and sums the set of television channel signals to provide an optimum or aggregate television channel signal for each set of television channel signals.

Clearly, there is nothing in this paragraph that teaches or suggests that a control signal “for controlling a gain of said amplifier circuit” (claim 1) is output “based on a channel being tuned by said television.” Rather, the cited portion of Stewart merely states that “the signal processing 60 separately adjusts the phase and gain of each set of television channel signals.”

There is no teaching or suggestion that the gain of an amplifier is controlled by a “control signal based on a channel being tuned by said television.” (Claim 3). For at least these additional reasons, Stewart clearly does not anticipate claim 3, and the rejection of claim 3 and the other claims noted here should be reconsidered and withdrawn.

Claim 7:

Claim 7 recites “wherein said control line carries a control signal which is a direct current (DC) voltage signal comprising a voltage to power said amplifier circuit plus an additional voltage that varies to indicate a desired gain of said amplifier circuit.” In this regard, the final Office Action cites Stewart at paragraph 0033. (Action, p. 5). However that portion of Stewart does not teach, suggest or even mentioned the claimed DC voltage for power an amplifier circuit “plus an additional voltage that varies to indicate a desired gain of said amplifier circuit.” Stewart clearly does not teach or suggest this subject matter.

The Advisory Action purports to address claim 7. (Advisory Action, p. 2). However, the Advisory Action still fails to indicate how or where Stewart teaches a “control line [that] carries a control signal which is a direct current (DC) voltage signal comprising a voltage to

power said amplifier circuit plus an additional voltage that varies to indicate a desired gain of said amplifier circuit.” (Claim 7). For at least these additional reasons, Stewart clearly does not anticipate claim 7, and the rejection of claim 7 and the other claims noted here should be reconsidered and withdrawn.

Claim 9:

Claim 9 recites “wherein said amplifier circuit comprises a voltage controlled amplifier, wherein said amplifier receives power and a voltage controlling a gain of said amplifier over said control line.” As noted above, the TSP taught by Stewart digitizes the signals (Fig. 7, element 58) before *digitally* adjusting gain (Fig. 7, element 60). Therefore, Stewart clearly does not teach or suggest the claimed voltage controlled amplifier of claim 9.

As above, the Advisory Action purports to address claim 9. (Advisory Action, p. 2). However, the Advisory Action still fails to indicate how or where Stewart teaches a “voltage controlled amplifier.” No such element has been identified in the teachings of Stewart. Moreover, the Advisory Action fails to indicate how or where Stewart teaches that the claimed “amplifier receives power and a voltage controlling a gain of said amplifier over [a] control line.” (Claim 9).

For at least these additional reasons, Stewart clearly does not anticipate claim 9, and the rejection of claim 9 and the other claims noted here should be reconsidered and withdrawn.

Claim 10:

Claim 10 recites “wherein said amplifier circuit comprises: an attenuator connected to and controlled by said control line; and an amplifier, wherein said attenuator selectively

attenuates a signal from said antenna before providing that signal to said amplifier.” In contrast, as clearly seen in Fig. 7 of Stewart, there is no attenuator, as claimed, that attenuates the signal from the antenna (Fig. 7, element 12) before its gain is adjusted (Fig. 7, element 60). Rather, Stewart only teaches tuning desired signals from the antenna array (Fig. 7, element 52) and digitizing those tuned signals (Fig. 7, element 56). Thus, Stewart clearly fails to teach or suggest the subject matter of claim 10.

The Advisory Action argues that an attenuator is inherent in the teachings of Stewart. (Advisory Action, p. 2). This is clearly incorrect. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.' 'Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (citations omitted). "[T]he examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990) (emphasis in original); see also, MPEP § 2112 (quoting Levy).

Clearly, the Examiner has failed to establish that Stewart “necessarily” includes an unmentioned attenuator. Because the final Office Action and Advisory Action fails to meet this standard of inherency with respect to the attenuator of claim 10, the rejection of claim 10 should not be sustained.

Claim 15:

Claim 15 recites:

wherein:

said exterior television antenna comprises two or more antenna elements differently oriented;

said amplifier circuit further comprises two or more amplifiers connected to respective antenna elements; and

said control line provides independent control signals to said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.

Stewart clearly does not teach or suggest this subject matter.

The Advisory Action directs attention to Fig. 8 and paragraphs 0062-63 in this regard.

(Advisory Action, p. 2). However, these portions of Stewart describe multiple antennae receiving the same channels, where the signals from the multiple antennae are combined to optimize the signal for that channel. This clearly does not teach or suggested the claimed “control line [that] provides independent control signals to said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.” (Claim 15).

For at least these additional reasons, Stewart clearly does not anticipate claim 15, and the rejection of claim 15 and the other claims noted here should be reconsidered and withdrawn.

(2) Claims 17, 33, 46 and 62 are patentable over Stewart and Flynn:

This rejection should not be sustained for at least the same reasons given above in favor of the patentability of the corresponding independent claims.

In view of the foregoing, it is submitted that the final rejection of the pending claims is improper and should not be sustained. Therefore, a reversal of the Rejection of June 27, 2008 is respectfully requested.

Respectfully submitted,

DATE: February 17, 2009

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VIII. CLAIMS APPENDIX

1. (original) A system for controlling an exterior television antenna comprising:

an amplifier circuit mounted on a building exterior with said exterior television antenna and connected to said television antenna; and

a control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.
2. (original) The system of claim 1, wherein said control line is connected to a television which outputs a control signal on said control line to control said amplifier circuit.
3. (original) The system of claim 2, wherein said television outputs said control signal based on a channel being tuned by said television.
4. (original) The system of claim 1, wherein said control line is connected to a control unit that is connected to a television and outputs a control signal on said control line to control said amplifier circuit.
5. (original) The system of claim 4, wherein said control unit outputs said control signal based on a channel being tuned by said television.

6. (original) The system of claim 1, wherein said control line also provides power for said amplifier circuit.

7. (original) The system of claim 6, wherein said control line carries a control signal which is a direct current (DC) voltage signal comprising a voltage to power said amplifier circuit plus an additional voltage that varies to indicate a desired gain of said amplifier circuit.

8. (original) The system of claim 1, further comprising a signal line connected to said amplifier circuit for transmitting an amplified signal from said antenna to a receiving device in said building;

wherein said control line is sheathed with said signal line.

9. (original) The system of claim 1, wherein said amplifier circuit comprises a voltage controlled amplifier, wherein said amplifier receives power and a voltage controlling a gain of said amplifier over said control line.

10. (original) The system of claim 1, wherein said amplifier circuit comprises:

an attenuator connected to and controlled by said control line; and

an amplifier,

wherein said attenuator selectively attenuates a signal from said antenna before providing that signal to said amplifier.

11. (original) The system of claim 10, wherein said attenuator is voltage controlled.

12. (original) The system of claim 11, wherein said control line also provides power for said amplifier circuit.

13. (original) The system of claim 1, wherein:
said exterior television antenna comprises two or more antenna elements differently oriented;
said amplifier circuit further comprising a controller connected to said control line and an amplifier; and
said controller selectively provides signals from said antenna elements to said amplifier in response to a control signal on said control line to adjust a polarity of said antenna.

14. (original) The system of claim 13, wherein said controller also selectively attenuates signals from said antenna elements based on said control signal to adjust an effective gain of said amplifier.

15. (original) The system of claim 1, wherein:
said exterior television antenna comprises two or more antenna elements differently oriented;
said amplifier circuit further comprises two or more amplifiers connected to respective antenna elements; and

said control line provides independent control signals to said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.

16. (original) The system of claim 15, wherein said amplifier circuit further comprises a summer for combining signals from said two or more amplifiers.

17. (original) The system of claim 1, further comprising a motor for selectively rotating said antenna.

18. (original) A method for controlling an exterior television antenna comprising:

selectively amplifying a signal from said television antenna with an amplifier circuit mounted on a building exterior with said exterior television antenna; and

a control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.

19. (original) The method of claim 18, further comprising:
generating a control signal with a television to which said control line is connected;
and
outputting said control signal on said control line to control said amplifier circuit.

20. (original) The method of claim 19, further comprising generating said control signal based on a channel being tuned by said television.

21. (original) The method of claim 18, further comprising:
generating a control signal with a control unit to which said control line is connected,
said control unit being connected to a television; and
outputting said control signal on said control line to control said amplifier circuit.

22. (original) The method of claim 21, wherein said control signal is based on
a channel being tuned by said television.

23. (original) The method of claim 18, further comprising providing power
for said amplifier circuit over said control line.

24. (original) The method of claim 23, wherein said control line carries a
control signal which is a direct current (DC) voltage signal comprising a voltage to power
said amplifier circuit plus an additional voltage that varies to indicate a desired gain of said
amplifier circuit.

25. (original) The method of claim 18, further comprising:
transmitting an amplified signal from said antenna to a receiving device in said
building over a signal line connected to said amplifier circuit; and
sheathing said control line with said signal line.

26. (original) The method of claim 18, wherein said amplifier circuit
comprises a voltage controlled amplifier, said method further comprising providing power
and a voltage controlling a gain of said amplifier over said control line.

27. (original) The method of claim 18, further comprising selectively attenuating a signal from said antenna before providing that signal to an amplifier of said amplifier circuit to control an effective gain of said amplifier.

28. (original) The method of claim 27, wherein said attenuating is performed with a voltage-controlled attenuator controlled via said control line.

29. (original) The method of claim 28, further comprising providing power for said amplifier circuit over said control line.

30. (original) The method of claim 18, wherein:
said exterior television antenna comprises two or more antenna elements differently oriented; and

said method further comprising selectively providing signals from said antenna elements to an amplifier of said amplifier circuit in response to a control signal on said control line to adjust a polarity of said antenna.

31. (original) The method of claim 30, further comprising selectively attenuating signals from said antenna elements based on said control signal to adjust an effective gain of said amplifier.

32. (original) The method of claim 18, wherein:
said exterior television antenna comprises two or more antenna elements differently oriented;

said amplifier circuit further comprises two or more amplifiers connected to respective antenna elements; and

said method further comprising independently controlling said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.

33. (original) The method of claim 18, further comprising selectively rotating said antenna.

34. (original) A system for controlling an exterior television antenna comprising:

amplifying means for selectively amplifying a signal from said television antenna, said amplifying means being mounted on a building exterior with said exterior television antenna; and

control means for controlling a gain of said amplifying means, said control means comprising a receiving device inside said building.

35. (original) The system of claim 34, wherein said receiving device comprises a television that generates a control signal for said amplifying means.

36. (original) The system of claim 35, wherein said control signal is based on a channel being tuned by said television.

37. (original) The system of claim 34, wherein said receiving device comprises a control unit connected to a television, said control unit generating a control signal for said amplifying means.

38. (original) The system of claim 37, wherein said control signal is based on a channel being tuned by said television.

39. (original) The system of claim 34, wherein said control means further comprise means for providing power for said amplifying means.

40. (original) The system of claim 39, wherein said control means comprise a control line that carries a control signal which is a direct current (DC) voltage signal comprising a voltage to power said amplifier circuit plus an additional voltage that varies to indicate a desired gain of said amplifying means.

41. (original) The system of claim 34, wherein said amplifying means comprise a voltage controlled amplifier, said control means further comprising means for providing power and a voltage controlling a gain of said amplifier.

42. (original) The system of claim 34, wherein said control means further comprise means for selectively attenuating a signal from said antenna before providing that signal to an amplifier of said amplifying means to control an effective gain of said amplifier.

43. (original) The system of claim 42, wherein said means for attenuating comprise a voltage-controlled attenuator.

44. (original) The system of claim 34, wherein:
said exterior television antenna comprises two or more antenna elements differently oriented; and
said control means further comprise means for selectively providing signals from said antenna elements to an amplifier of said amplifying means in response to a control signal to adjust a polarity of said antenna.

45. (original) The system of claim 34, wherein:
said exterior television antenna comprises two or more antenna elements differently oriented;
said amplifying means further comprise two or more amplifiers connected to respective antenna elements; and
said control means further comprise means for independently controlling said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.

46. (original) The system of claim 34, further comprising means for selectively rotating said antenna.

47. (original) A system for controlling a television antenna comprising:

an amplifier circuit mounted with said television antenna and connected to said television antenna, wherein said television antenna is connected to, but located away from, a receiving device; and

a control line connected to said amplifier circuit for controlling a gain of said amplifier circuit based on a channel being tuned by said receiving device.

48. (original) The system of claim 47, wherein said control line is connected to a television which outputs a control signal on said control line to control said amplifier circuit.

49. (original) The system of claim 47, wherein said control line is connected to a control unit that is connected to a television.

50. (original) The system of claim 49, wherein said control unit outputs said control signal based on a channel being tuned by said television.

51. (original) The system of claim 47, wherein said control line also provides power for said amplifier circuit.

52. (original) The system of claim 51, wherein said control line carries a control signal which is a direct current (DC) voltage signal comprising a voltage to power said amplifier circuit plus an additional voltage that varies to indicate a desired gain of said amplifier circuit.

53. (original) The system of claim 47, further comprising a signal line connected to said amplifier circuit for transmitting an amplified signal from said antenna to said receiving device;

wherein said control line is sheathed with said signal line.

54. (original) The system of claim 47, wherein said amplifier circuit comprises a voltage controlled amplifier, wherein said amplifier receives power and a voltage controlling a gain of said amplifier over said control line.

55. (original) The system of claim 47, wherein said amplifier circuit comprises:

an attenuator connected to and controlled by said control line; and

an amplifier,

wherein said attenuator selectively attenuates a signal from said antenna before providing that signal to said amplifier.

56. (original) The system of claim 55, wherein said attenuator is voltage controlled.

57. (original) The system of claim 56, wherein said control line also provides power for said amplifier circuit.

58. (original) The system of claim 47, wherein:

said television antenna comprises two or more antenna elements differently oriented;

said amplifier circuit further comprising a controller connected to said control line and an amplifier; and

said controller selectively provides signals from said antenna elements to said amplifier in response to a control signal on said control line to adjust a polarity of said antenna.

59. (original) The system of claim 58, wherein said controller also selectively attenuates signals from said antenna elements based on said control signal to adjust an effective gain of said amplifier.

60. (original) The system of claim 47, wherein:
said television antenna comprises two or more antenna elements differently oriented;
said amplifier circuit further comprises two or more amplifiers connected to respective antenna elements; and
said control line provides independent control signals to said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.

61. (original) The system of claim 60, wherein said amplifier circuit further comprises a summer for combining signals from said two or more amplifiers.

62. (original) The system of claim 47, further comprising a motor for selectively rotating said antenna.

IX. Evidence Appendix

None

X. Related Proceedings Appendix

None